

REMARKS

Reconsideration of the present application is respectfully solicited in view of the foregoing amendments and the following remarks.

By this amendment, Applicants have cancelled Claims 26, 29 and 30, amended Claim 1 to depend from Claim 27, and added new Claims 31-33. Consequently, the present application now contains Claims 1, 3, 5-13, 15, 16, 27, 28 and 31-33. Claim 27 is now the only independent claim with the remaining claims all depending from Claim 27.

CLAIM REJECTIONS - 35 USC § 103

Claims 27, 28 and 30 stand rejected under 35 USC § 103(a) as being unpatentable over Ackerman (US 2002/0157421 A1) and Okamoto et al. (US 4,358,306) and further in view of Adler (US 6,588,230) and Imoto et al. (Journal of Lightwave Technology V.6, n.9 (1988), 1376-1385) and the ordinary level of skill in the art at the time of the invention. Applicants respectfully traverse this rejection.

At the outset, Applicants note that the claimed geometrical configuration of the burner, furnace muffle and target is important to obtain a doped quartz glass product that is very homogeneous and contains very little defects as is necessary for the intended use in EUV lithography.

The Examiner notes that Adler discloses a gap between the burner and the outer face of the crown, which is described in practice to be about a quarter inch in height (see col. 2, lines 2-4). However, according to present Claim 27, the distance between the flame outer rim and the refractory material of the furnace muffle shall be between 10 and 20 millimeters which is quite different from a quarter inch (6.35 millimeters). This difference is important in contributing to the avoidance of inhomogeneity and defects. It is not simply within the knowledge of one skilled in the art, as these design parameters may vary over a broad range.

In addition, the configuration according to Imoto is also completely different from the configuration defined in Claim 27. In particular, contrary to the present invention, wherein the first formed glass body is formed through an opening of a furnace muffle, in the Imoto reference, the burner and the target are both placed within the furnace.

Accordingly, Claim 27 is believed to patentably distinguish the present invention over the cited art.

Also, new Claim 33 and amended Claim 12 are directed to an additional difference with respect to Imoto. Imoto places the burner at the bottom and uses a soot preform which is placed above the burner (see section "Equipment" and Fig. 1).


Claims 33 and 12 on the other hand, recite that the target is arranged below the burner and the first formed body is grown substantially in the vertical direction.

Accordingly, Claims 33 and 12 patentably distinguish the present invention over the cited art for this additional reason as well.

The present application is therefore believed to be in condition for allowance. Favorable reconsideration is respectfully requested.

Respectfully submitted,

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